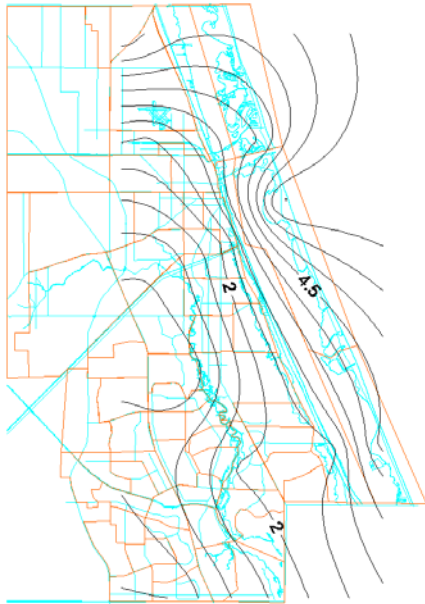


The ULV (fogging) program

The ULV spray truck (fog truck) is one of the most familiar aspects of the mosquito control program. The Ultra Low Volume (ULV) equipment that the truck carries meters out chemicals in minute amounts at extremely small droplet sizes. This technology greatly increases the effectiveness of the mosquito control insecticides, allowing the district to use less pesticide than was used in the old style “fog trucks”. The spray vehicles are equipped with computers that monitor both the vehicle speed using GPS technology, and the amount of pesticide being sprayed, enabling the machinery to adjust the spray volume to the truck’s speed, thus assuring that the correct amount of chemical is being dispersed at all times.

The district presently has 14 spray vehicles and deploys about 12 of them each spray night. Each truck is able to cover one fog zone in an evening ([Click here to view fog zone maps](#)), allowing us to do the entire district in about a week. Generally, contiguous zones are fogged. This strategy improves the efficacy of the spray program because large areas can be covered in a single evening, reducing the numbers of mosquitoes that potentially could migrate back into a treated zone from adjacent zones. Spraying operations usually commence about sunset and continue for 3 to 4 hours into the evening. This period is the time when many mosquito species are most active and most vulnerable to the mosquito control chemicals. Mosquito spraying is a seasonal program, beginning in mid April and ending in the late fall. During the cooler months, mosquito populations are generally lower and temperatures are usually too cool for spraying to be effective.



Decisions regarding what areas to spray are based on mosquito trap counts, environmental data, citizen complaints and direct observations by district inspectors. Trap and environmental data are entered into a database that is linked to both a GIS mapping system and contouring algorithms. This information enables the biologist to create maps of mosquito distributions within the district. For example, the enclosed map shows the distribution of salt marsh mosquitoes (contours are natural logs of mosquito numbers) in mid May 2002. It shows that the highest concentrations of this species are on the barrier island but some mosquitoes are migrating inland. In this situation, we would probably concentrate our

spraying efforts near the coast. In most cases, the frequency of citizen complaints and observations by inspectors generally corroborate trap data. The contouring algorithms also give us some ability to predict where possible future mosquito infestations might

occur. For example, a heavy rainfall in inland areas could portend an increase in floodwater mosquitoes in populated areas of the county.